

PATENT COOPERATION TREATY

FILE COPY 210

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Form PCT/ISA/210 (first sheet)(July 1992) DO NOT MAIL

Applicant's or agent's file reference 9584-006-228	<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> FOR FURTHER ACTION </div> <div style="width: 60%;"> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. </div> </div>	
International application No. PCT/US99/27748	International filing date (<i>day/month/year</i>) 22 NOVEMBER 1999	(Earliest) Priority Date (<i>day/month/year</i>) 25 NOVEMBER 1998
Applicant The Perkin-Elmer Corporation		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of ____ sheets.

☒ ☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).

2. ☐ Unity of invention is lacking (See Box II).

3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing

- ☐ filed with the international application.
☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ transcribed by this Authority.

4. With regard to the **title**, ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is:

- Figure No. ____ ☐ as suggested by the applicant. ☒ None of the figures.
☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.

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International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

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Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

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International application No.
PCT/US99/27748

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 435/91.1, 436/501, 536/23.1, 536/24.3, 536/24.33, 422/50, 422/68.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Please See Extra Sheet.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	0 605 828 BECTON, DICK (13.07.94) EP0, 605,828 A1 (Feindt et al) 13 July 1994, page 3, fourth paragraph; page 6, third and fourth paragraph, lines 9-14 and table.	1-3, 12, 15, 23, 26, 27, 32, 36, 40, 41, 44, 53, and 54
X	A TAM ← Sole inventor (21.04.98) US 5,741,647, (Tam et al) 21 April 1998, page 2, lines 1-4; page 10, example 1; page 12, example IV, lines 6-10.	1-3, 5, 7, 8, 12, 14, 15, 21-23, 27, 29, 31, 32, 40, 41, 44, 53, and 54

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
10 FEBRUARY 2000

Date of mailing of the international search report

Facsimile No. (703) 305-3230

Authorized officer AND Telephone No.
FRANK LU (703) 305-1270

INTERNATIONAL SEARCH REPORT
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International application No.
PCT/US99/27748

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHOU Chou et al., Affinity methods for purification of DNA sequencing reaction products for mass spectrometric analysis. Rapid Commun. Mass Spectr. 10, 1410-1414, 1996. Page 1410, abstract and column 2, lines 6-17; page 1411. <i>Vol. 10, pages 1410-1414, especially page</i>	1-3, 5, 12, 14, 15, 21, 22, 23, 29, 37, 38, and 42-46
X	CHENG Cheng et al., Chip PCR. II. Investigation of different PCR amplification systems in microfabricated silicon-glass chips. Nucleic Acids Research 24, 380-385, 1996. Page 381, the third and fourth paragraphs. <i>A1 1996, Vol. 24, No. 2, pages 380-385, especially page</i>	45 and 47
Y	WO 95/188,51 (Meyers) 13 July 1995, page 9 <i>(QIAGEN GMBH), 13 July 1995 (13.07.95), see page 9 (13.11.91), see</i>	6, 9, 10, 30, 33 and 34
Y	EP 0,455,905A2 (Van Ness) 13 November 1991, page 2, ten paragraph; page 5, third and fourth paragraphs; page 12, the fourth and fifth paragraphs. <i>(MICROPROBE CORPORATION)</i>	1-5, 8, 12, 14-18, 20-25, 27-29, 32, 36, 40, 41, and 50-56
Y	FAHY Fahy et al., Design and synthesis of polyacrylamide-based oligonucleotide supports for use in nucleic acid diagnostics. Nucleic Acids Res. 21, 1819-1826, 1993, page 1826, column 1, second paragraph. <i>1993, Vol. 21, No. 8, pages 1819-1826, especially</i>	1-5, 8, 12, 14-18, 20-25, 27-29, 32, 36, 40, 41, 44, and 50-56
Y (P?)	Biorad Catalog (1998/99) page 71	1-5, 8, 12, 14-18, 20-25, 27-29, 32, 36, 40, 41, 44, and 50-56

We Need to
get more info
from this catalog
e.s. showing
date/copyright date, esp. since
this could be a "P" ref. 1
Can add "title" to this
cite "Bio-gel P Polyacrylamide Gels".
Please speak to the
exr. Thanks Terry
Lynn

INTERNATIONAL SEARCH REPORT

Information on patent family members

Form PCT/ISA/210 (patent family annex)(July 1992)

FILE COPY - DO NOT MAIL

International application No.

PCT/US99/27748

INTERNATIONAL SEARCH REPORT
Form PCT/ISA/210 (extra sheet)(July 1992)
FILE COPY - DO NOT MAIL

International application No.
PCT/US99/27748

A. CLASSIFICATION OF SUBJECT MATTER:
IPC (6):

C12Q 1/68, C12P 19/34, G01N 33/566, C07N 21/02, C07N 21/04, G01N, G01N 15/06

A. CLASSIFICATION OF SUBJECT MATTER:
US CL :

435/6, 435/91.1, 436/501, 536/23.1, 536/24.3, 536/24.33, 422/50, 422/68.1

B. FIELDS SEARCHED

Documentation other than minimum documentation that are included in the fields searched:

STN and WEST

search term: DNA sequencing, solis support, capture, flow-through device, hybridization, covalently, linkage, phosphodiester, phosphorothioate, phosphoramidate, polyethylene, polystyrene, polycarbonate and column

CAN BE WRITTEN
LIKE
THIS
1/3 should be

Good job
Terry!

C12Q 1/68; C12P 19/34;

G01N 15/06, 33/566;

C07N 21/02, 21/04

No
longer
245x5

??

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: SAMUEL B. ABRAMS
PERKIE & EDMONDS LLP
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

FILE COPY 220

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

Form PCT/ISA/220 (January 1994) DO NOT MAIL

Applicant's or agent's file reference ✓ 9584-006-228		Date of Mailing (day/month/year)
International application No. ✓ PCT/US99/27748		International filing date (day/month/year) ✓ 22 NOVEMBER 1999
Applicant The Perkin-Elmer Corporation		

ALL CARS

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in rules 90 *bis* 1 and 90 *bis* 3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

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